



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/616,453

07/08/2003

Victor B. Kley

020921-001612US

1054

20350

7590

12/10/2004

TOWNSEND AND TOWNSEND AND CREW, LLP  
TWO EMBARCADERO CENTER  
EIGHTH FLOOR  
SAN FRANCISCO, CA 94111-3834

EXAMINER

KALIVODA, CHRISTOPHER M

ART UNIT

PAPER NUMBER

2883

DATE MAILED: 12/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/616,453	Applicant(s) KLEY, VICTOR B.	
	Examiner Christopher M. Kalivoda	Art Unit 2883	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 July 2003.
- 2a) ☐ This action is FINAL.      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 9, 18, 44-47, 54-64 and 89-103 is/are pending in the application.
- 4a) Of the above claim(s) 9, 18, 44-47 and 54-64 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 89-103 is/are rejected.
- 7) ☒ Claim(s) 91 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>05/28/2004</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election without traverse of Group 1 in the reply filed on September 17, 2004 is acknowledged. The claims examined will include 89-91 and new claims 92-103 (i.e. 89-103) as described in Applicant's concluding paragraph in the above reply.

### ***Specification***

The disclosure is objected to because of the following informalities: The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification. Appropriate correction is required.

### ***Claim Objections***

Claim 91 is objected to because of the following informalities: The claim references "the fluid material" in line 3. However, there is no antecedent basis. Appropriate correction is required.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA

Art Unit: 2883

1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 89-103 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 8, 9, 17 and 18 of U.S. Patent No. 6,353,219. Although the conflicting claims are not identical, they are not patentably distinct from each other because in independent claims 89 and 91, both the pending application and patent claim a probe for delivering fluid material (claim 8). SPM probes comprise a tip and cantilever and since the probe delivers a fluid and the fluid is pumped (claim 9) there would be a capillary associated with the tip. Since there is a pump, it would be in fluid communication with the capillary in order to pump the fluid through the capillary to be ejected by the capillary and delivered to the object (claim 8) in response to a control signal received by the pump since a specific modification is performed (claim 1). In addition the above, the object the fluid is delivered to is a mask (claims 17-18).

Regarding claims 90 and 92, the pump would have a base. Since an SPM probe is used, there would be a support platform connected to the tip since SPM probes include a tip connected to a cantilever as described above so the support structure/cantilever would also have a duct so the fluid can flow through the tip.

Art Unit: 2883

Regarding claim 93, there would also be a controller since modification data is received and in response to the modification data, an action is performed (claim 1).

Regarding claim 94, a liquid is a form of fluid (see claim 8).

Regarding independent claim 95, both the pending application and patent claim a method involving steps of receiving modification data describing an addition to be performed on a mask and in response to the modification data, performing the modification by adding fluid to the mask with an SPM (see claims 1, 8 18).

Regarding claim 96, the modification data is generated by making SPM measurements (see claim 1).

Regarding claims 97 and 98, the SPM measurements can be generated with the same SPM probe used to add fluid to the mask or a different SPM probe used to add the fluid (see claim 1).

Regarding claim 99, a liquid is a form of fluid (see claim 8).

Regarding claim 100, the fluid would be introduced to the mask through an orifice in the tip of the SPM probe since the SPM probe delivers the fluid (see claim 8).

Regarding claim 101, the mask can be used in a lithographic process (see claims 17-18).

Regarding independent claim 102, modification data representing a required modification is received as described above and in response, an ion beam is directed to the mask with an SPM probe configured as an ion beam tool (claims 1, 10 and 12).

Regarding claim 103, the modification data is generated by making SPM measurements (see claim 1).

Art Unit: 2883

**Conclusion**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent 6,737,331 to Lewis describes a force-sensing device with multiple channels. U.S. Patent Application 2004/0118192 describes SPM components with fluidic channels.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Kalivoda whose telephone number is (571) 272-2476. The examiner can normally be reached on Monday - Friday (8:30 - 5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

cmk  
cmk

*Nikita Wells*  
NIKITA WELLS  
PRIMARY EXAMINER 12/03/04